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(71) Applicant (for all designated States except US): **KONIN-  
KLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL];  
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **VAN DEN BRINK**,  
Johan, S. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA  
Eindhoven (NL).

(74) Agent: **COHEN, Julius, S.**; Prof. Holstlaan 6, NL-5656  
AA Eindhoven (NL).

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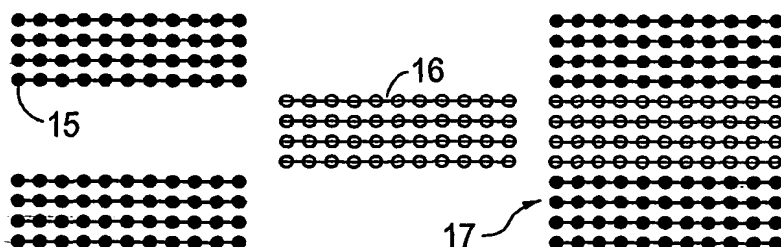
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ning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM AND METHOD FOR MAGNETIC RESONANCE IMAGING



(57) Abstract: The invention relates to a system and method for magnetic resonance imaging. In order to achieve high resolution imaging a magnetic resonance imaging system and method is proposed, wherein magnetic resonance signals using a first resonance frequency are used for a central portion of k-space and magnetic resonance signals using a second resonance frequency are used for a peripheral portion of k-space. In a

preferred embodiment of the invention non-proton magnetic resonance signals are used for the central portion of the k-space and proton magnetic resonance signals are used for the periphery of k-space. Accordingly, the reconstructed magnetic resonance image shows contrast relating to the non-proton nuclei and fine resolution dominated by the protons. Hence, the invention can especially provide a solution for the limited time available for the acquisition of non-proton magnetic resonance signals.